

MERIDIAN OIL

1/4/90

January 4, 1990

Mr. David Catnach
Oil Conservation Division
P. O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

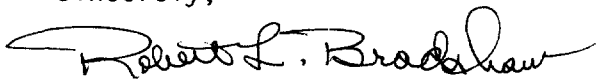
Re: Southland Royalty Company
West Corbin Federal #4 SWD
Unit J, Sec. 18, T18S, R33E
Lea County, New Mexico

Gentlemen:

Subsequent to an Oil Conservation Division witnessed bradenhead test which exceeded the authorized injection pressure, the referenced well was shut-in. A recent step rate test indicates the breaking point to be 1485 psi. This is a conservative figure since the step rate test was limited by the 2000 psi wellhead. We are requesting the authorized injection pressure be increased to 1450 psi. The tabular data and the graph from the step rate test are attached to support this request.

If other data are needed, please contact me at (915) 686-5678.

Sincerely,

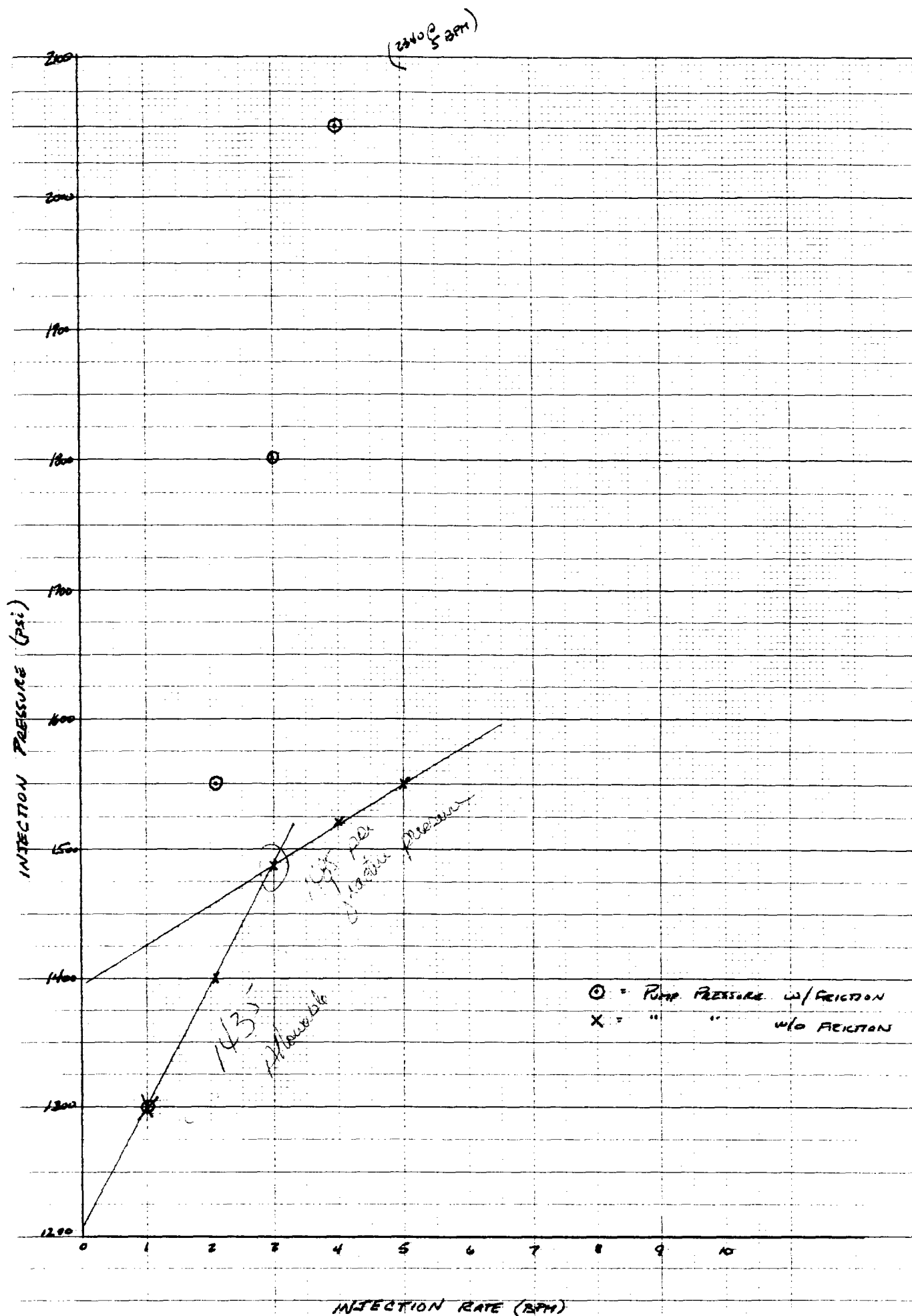


Robert L. Bradshaw
Sr. Staff Env./Reg. Specialist

RLB:gs

Attachments

cc: Well File - Midland
O.C.D. - Hobbs



WEST CORBIN #4

STEP RATE INJECTION TEST

<u>RATE</u> (BPM)	<u>TIME</u> (MIN)	<u>VOLUME</u> (GALS)	<u>RECORDED</u> <u>SURFACE PRESSURE</u> (PSI)	<u>FRICTION PRESSURE</u> <u>@ RATE (PSI)</u>	<u>NET</u> <u>SURFACE PRESSURE</u> (PSI)
1.0	10	10	1300	~	1300
2.0	10	20	1550	150	1400
3.0	10	30	1800	312	1488
4.0	10	40	2050	528	1522
5.0	10	50	2340	788	1552
6.0	UNABLE TO OBTAIN DUE TO LIMITATION OF 2000# WELLHEAD				

* FRICTION PRESSURES OBTAINED USING PUBLISHED CURVES FOR
9.5# BRINE PUMPED DOWN 2 7/8" TUBING

$$ISIP = 1400 \text{ psi}$$

$$SITP \text{ AT } 10" = 1375 \text{ psi}$$

$$SITP \text{ AT } 15" = 1350 \text{ psi}$$

CALCULATED FRACTURE GRADIENT:

$$FG = \frac{(P_{surf} + HP \text{ AT BREAKDOWN})}{DEPTH}$$

$$FG = \frac{[1400 + (9.5)(.052)(5100)]}{5100}$$

$$FG = .76 \text{ PSI/FE} *$$

* THIS ALSO CORRESPONDS TO FRACTURE LOG DATA TAKEN IN
DELAWARE SAND ON OFFSET WELLS.

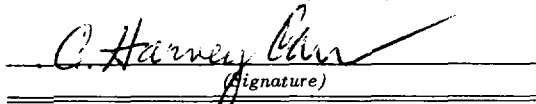
Page
Date
By

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Southland Royalty Company		ADDRESS 1100 Wall Towers West Midland, TX 79701			
LEASE NAME West Corbin		WELL NO. 4	FIELD Corbin Delaware West		COUNTY Lea
LOCATION UNIT LETTER <u>H</u> ; WELL IS LOCATED <u>2310</u> FEET FROM THE <u>south</u> LINE AND <u>2310</u> FEET FROM THE <u>east</u> LINE, SECTION <u>18</u> TOWNSHIP <u>18-S</u> RANGE <u>33-E</u> NMPM.					
CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	8 5/8"	340'	250 sx.	Circ.	Observation
INTERMEDIATE	-				
LONG STRING	5 1/2"	5117'	1st stage 500 sx. - unknown 2d stage 200 sx. - DV tool	@ 1443', circ. to surface.	
TUBING All tubing plastic coated	2 7/8"	5020'	NAME, MODEL AND DEPTH OF TUBING PACKER Baker "AD" Tension Type Packer		
NAME OF PROPOSED INJECTION FORMATION Delaware (Cherry Canyon Sand)		TOP OF FORMATION 5032'		BOTTOM OF FORMATION 5062'	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLE? Perforations		PROPOSED INTERVAL(S) OF INJECTION 5032-5062'	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Drilled as producing well but is too low structurally to produce.			HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH No other zones					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 200		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA None		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA Morrow	
ANTICIPATED DAILY INJECTION VOLUME (BBLs.) 100	MINIMUM 100	MAXIMUM 200	OPEN OR CLOSED TYPE SYSTEM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Gravity	APPROX. PRESSURE (PSI) Vacuum
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - Yes			WATER TO BE DISPOSED OF Yes	NATURAL WATER IN DISPOSAL ZONE Yes	ARE WATER ANALYSES ATTACHED? Yes
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Federal Land: Surface Lessee -- Gary Caviness, Maljamar, New Mexico					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL None within one-half mile.					
cc: USGS - Hobbs, NM					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? Yes		SURFACE OWNER Yes		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) Yes		PLAT OF AREA Yes		ELECTRICAL LOG Yes	
				THE NEW MEXICO STATE ENGINEER Yes	
				DIAGRAMMATIC SKETCH OF WELL Yes	

I hereby certify that the information above is true and complete to the best of my knowledge and belief.


(Signature)District Engineer
(Title)4-5-78
(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

RECEIVED

APR 10 1978

OIL CONSERVATION COMM.
HOBBS, N. M.

W. Corbin #2
File

November 24, 1976

~~Mr. Arthur W. Brown, District Engineer
United States Geological Survey
P.O. Box 1157
Hobbs, New Mexico 88401~~

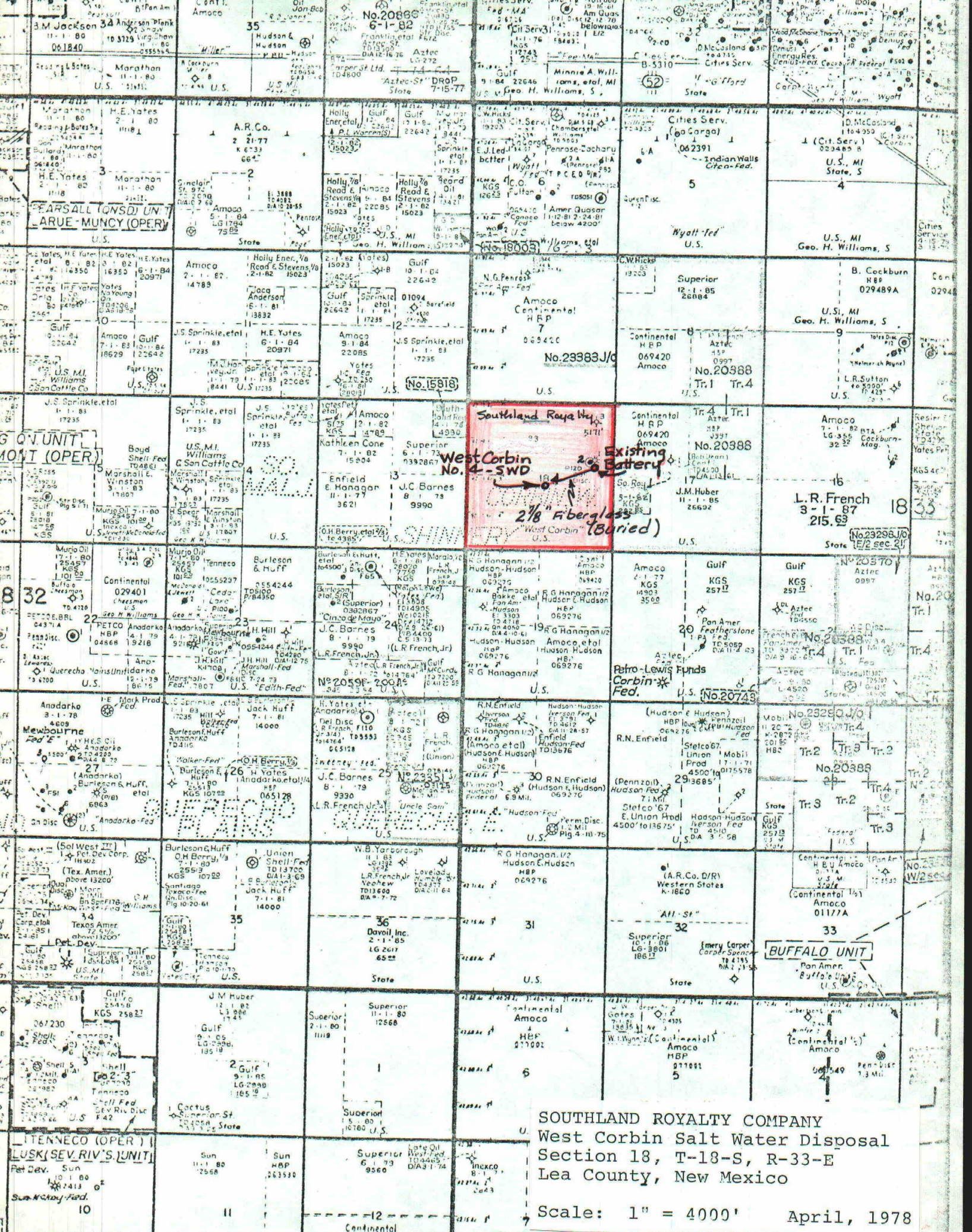
Dear Mr. Brown:

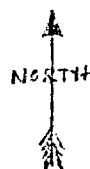
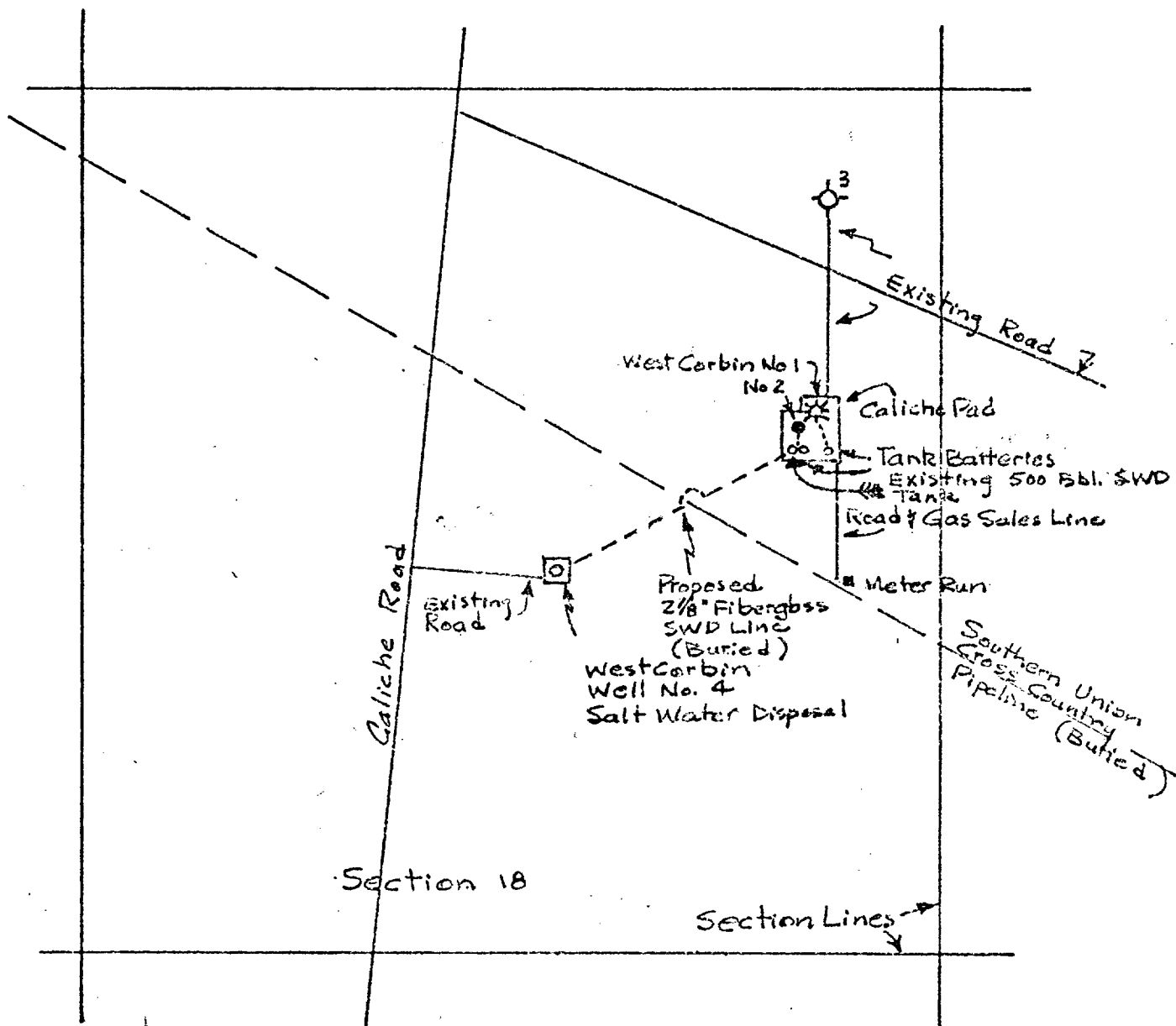
Recently our office received a letter from you requesting water disposal procedures and data on our West Corbin No. 2 lease, 134-93. At the present, water produced is being contracted for transport and disposal. Other pertinent information regarding this matter is listed as follows:

1. Location: 8030' FUL & 860' FUL, Sec 13-18s-33e, Lea County, New Mexico.
2. Formation Producing Water: Delaware Sand (Cherry Canyon).
3. Average Barrels of Water Per Day: ¹⁶⁰~~140~~ bbls.
4. Water Quality Data:
 - A. Resistivity - .042 @ 74°F
 - B. Specific Gravity - 1.182
 - C. pH - 6.1
 - D. Calcium (Ca) - 7,000
 - E. Magnesium (Mg) - 6,600
 - F. Chlorides (Cl) - 173,000
 - G. Sulfates (SO₄) - 1,600
 - H. Bicarbonates (HCO₃) - 730
 - I. Soluble Iron (Fe) - Nil
5. Contractor: Steve Carter & Son
6. SWD Disposal Location: Laguna Disposal.

Respectfully submitted,

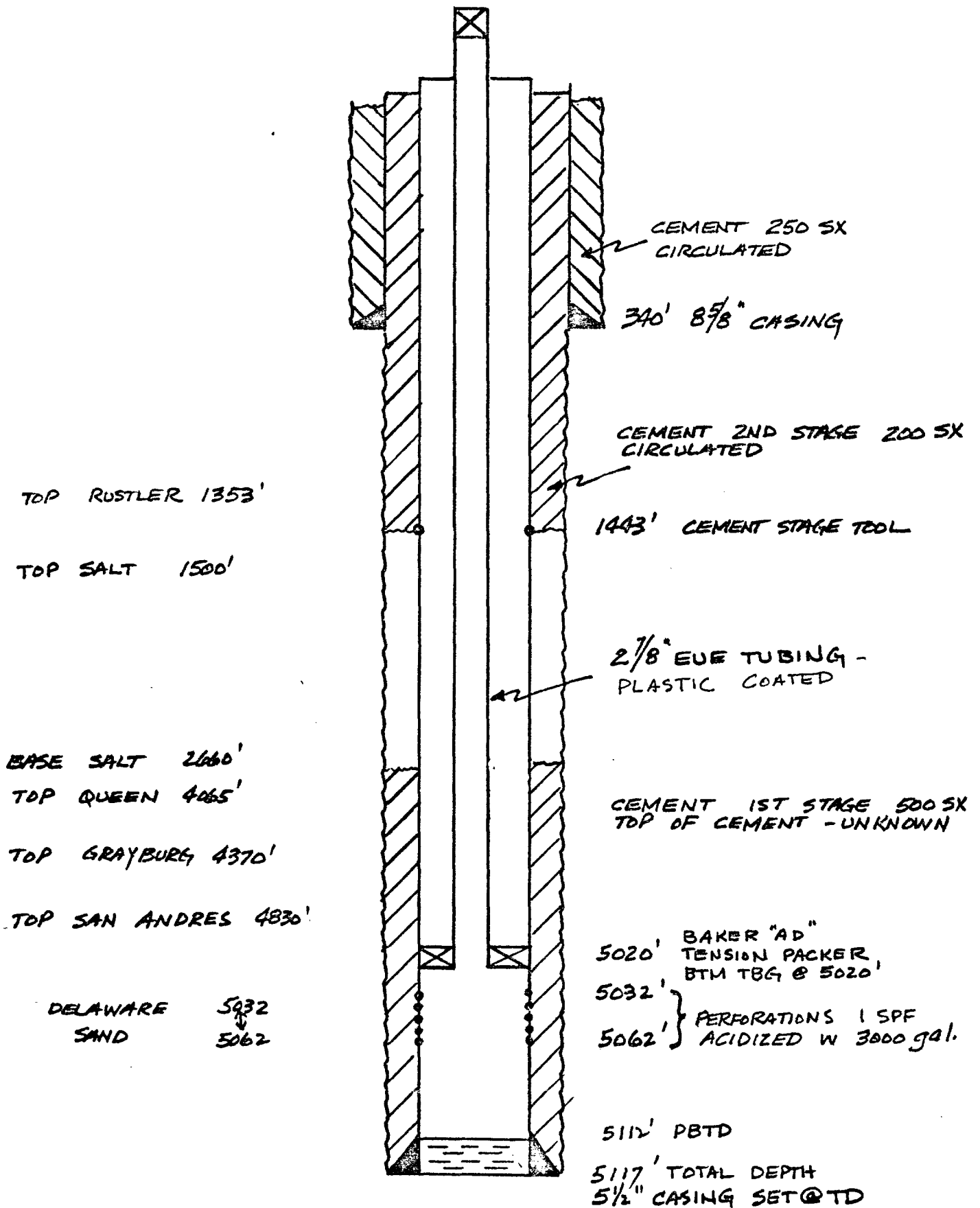
Gary D. Wilson
District Clerk





Southland Royalty Company
 West Corbin Salt Water Disposal
 Sec. 18, T-18-S, R-33-E
 Lea County, New Mexico
 Scale: 1" = 1000'

SOUTHLAND ROYALTY COMPANY
 WEST CORBIN WELL No. 4
 2310' FSL & 2310' FEL SEC. 18, T-18-S, R-33-E
 LEA COUNTY, NEW MEXICO



CHC
 3-78

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	GAS	
OPERATOR		
PRORATION OFFICE		

NEW MEXICO OIL CONSERVATION COMMISSION
REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Form C-104
Supersedes Old C-104 and C-110
Effective 1-1-65

I. Operator
 Aztec Oil & Gas Company
 Address
 Box 837, Hobbs, New Mexico 88240

Reason(s) for filing (Check proper box)
 New Well ☒ Change in Transporter of:
 Recompletion ☐ Oil ☐ Dry Gas ☐
 Change in Ownership ☐ Casinghead Gas ☐ Condensate ☒

Other (Please explain)
 Request permission to move 150 bbls. con-
 produced while testing.

If change of ownership give name
and address of previous owner

II. DESCRIPTION OF WELL AND LEASE Wildcat 2 1/2 - 11

Lease Name West Corbin	Well No. 1	Pool Name, Including Formation South Corbin-Morrow Gas	Kind of Lease State, Federal or Fee Federal	Lease No. NM 193
Location Unit Letter <u>H</u> ; <u>1980</u> Feet From The <u>North</u> Line and <u>660</u> Feet From The <u>East</u> Line of Section <u>18</u> Township <u>18</u> Range <u>33</u> , NMPM, <u>Lea</u> County				

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil ☐ or Condensate ☐ Permian Corp	Address (Give address to which approved copy of this form is to be sent) P.O. Box 1183, Houston, Texas
Name of Authorized Transporter of Casinghead Gas ☐ or Dry Gas ☐ Southern Union Gas Co.	Address (Give address to which approved copy of this form is to be sent) 1507 Pacific Ave., Dallas, Texas
If well produces oil or liquids, give location of tanks. Unit <u>H</u> Sec. <u>18</u> Twp. <u>18</u> Rge. <u>33</u>	Is gas actually connected? <u>No</u> When

If this production is commingled with that from any other lease or pool, give commingling order number:

V. COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'tv.	Diff. Res'tv.
		☒	☒					
Date Spudded 8-14-74	Date Compl. Ready to Prod. 2-20-75	Total Depth 13700	P.B.T.D. 13620					
Elevations (DF, RKB, RT, GR, etc.) 3875 DF	Name of Producing Formation Morrow	Top Oil/Gas Pay 13342	Tubing Depth 13285'					
Perforations 13342-47, 13360-64, 13408-16, 13424-30, 13435-44, 13458-63, 13560-66, 13574-84, 13586-90, w/4 holes/ft.			Depth Casing Shoe 13700					
TUBING, CASING, AND CEMENTING RECORD								
HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT					
17 1/2	13 3/8	367	320 Circ.					
11	8 5/8	4425	2065 Circ.					
7 7/8	5 1/2	13700	300					
	2 3/8	13285						

V. TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil - Bbls.	Water - Bbls.	Gas - MCF

GAS WELL

Actual Prod. Test-MCF/D 477	Length of Test 4 Hrs	Bbls. Condensate/MMCF 2	Gravity of Condensate 52
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OIL CONSERVATION COMMISSION
HOBBS DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE April 11, 1978

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed SWD X _____
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated _____
for the Southland Royalty Co. West Corbin #4-J 18-18-33
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

O.K.----J.S.

Yours very truly,

